

JOURNAL SUPPLEMENT

Vol. 38, No. 3

MARCH, 1959

THE INSTITUTION OF PRODUCTION ENGINEERS, 10 CHESTERFIELD STREET, MAYFAIR, LONDON, W.1

SEVENTH CONFERENCE ON PROBLEMS OF AIRCRAFT PRODUCTION

(promoted by the Southampton Section of the Institution)

at the

UNIVERSITY OF SOUTHAMPTON

(by kind permission of the Vice-Chancellor)

Thursday, 16th April and Friday, 17th April, 1959

Theme: "The Aircraft Industry - A National Asset"

PROGRAMME

The Conference will commence with the official luncheon on Thursday, 16th April, when the principal speakers will be **The Worshipful The Mayor of Southampton** and **Air Chief Marshal Sir Claude Pelly**, K.C.B., C.B.E., M.C., A.D.C. Following the luncheon, the 1959 Lord Sempill Paper will be presented by **Lord Douglas of Kirtleside**, G.C.B., M.C., D.F.C., Chairman of British European Airways, whose subject will be "THE OPERATOR".

Other speakers will be:

Mr. Peter Masefield, M.A., F.R.Ae.S., M.Inst.T., F.I.Ae.S., C.I.Mech.E., Managing Director, Bristol Aircraft Ltd., who will talk on "THE INDUSTRY"; and

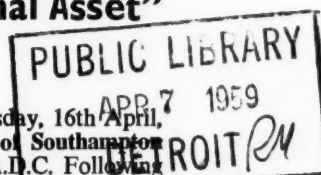
Mr. S. P. Woodley, M.B.E., General Manager, Vickers-Armstrongs Aircraft Ltd., who will discuss "THE IMPACT ON OTHER INDUSTRIES".

The final Session of the Conference will take the form of an open Forum when the three principal speakers, together with **Sir Arnold Hall**, M.A., F.R.S., A.C.G.I., F.R.Ae.S., President of the Royal Aeronautical Society, and Technical Director of the Hawker Siddeley Group; and **Mr. Eric Turner**, Chairman and Managing Director, Blackburn & General Aircraft Ltd., will discuss the importance of the aircraft industry in the national economy.

The Conference will end at midday on Friday, 17th April, 1959.

The Conference fee, inclusive of prints of Papers, luncheon and light refreshments, is £4. Applications should be made on the form overleaf. Places will be allotted in strict order on receipt of applications, and priority will be given to members of the Institution who apply before **Monday, 23rd March, 1959**.

CLOSING DATE FOR APPLICATIONS — MONDAY, 30th MARCH, 1959



To : The Secretary,
The Institution of Production Engineers,
10 Chesterfield Street,
Mayfair, London, W.1.

DATE RECEIVED AT HEAD OFFICE

MEMBER / NON-MEMBER

SEVENTH AIRCRAFT PRODUCTION CONFERENCE

1. NAME.....
2. GRADE OF MEMBERSHIP.....
3. HONOURS, DEGREES, OTHER QUALIFICATIONS.....
4. ADDRESS.....
5. NAME OF COMPANY.....
6. POSITION HELD.....

N.B.—If more than ONE ticket is required, please supply information 1 to 6 on a separate sheet of paper for each ticket applied for.

Please send me ticket(s) at 80/- each, for which I enclose remittance for £.....

Signature.....

Date.....

Please note that cheques, etc., should be made payable to "The Institution of Production Engineers". Receipts will not be issued. Tickets and joining instructions will be sent in good time.

QUALITY IN INDUSTRY

A CONFERENCE

organised jointly by

The Institution of Production Engineers, The Institution of Engineering Inspection, and The British Productivity Council, on the theme:

"QUALITY IN INDUSTRY"

will be held at the Palace Hotel, Buxton, on **Thursday, 18th June,** and **Friday, 19th June, 1959,** commencing on the Thursday afternoon.

This Conference will examine from various viewpoints the many problems involved in establishing and maintaining standards of Quality in Industry.

Full details of the programme will be announced very shortly, but those interested in attending the Conference are advised to book their accommodation **NOW**. No arrangements for delegates' accommodation can be made by the organisers of the Conference, but a list of hotels in Buxton, together with a Conference Application Form, may be obtained from:

The Conference Secretary,
The Institution of Production Engineers,
10 Chesterfield Street,
Mayfair, London, W.1.

The Conference fee will be £5 5s. 0d. (inclusive of light refreshments, Conference papers, etc.).

THE 1958 GEORGE BRAY MEMORIAL LECTURE

Members are advised that The 1958 George Bray Memorial Lecture will be presented on **Wednesday, 29th April, 1959**, at The Royal Commonwealth Society, London. The speaker will be **Mr. Mark Bogod**, Director of J. Lyons & Company, Ltd., who will take as his subject:

"THE SEARCH FOR PRODUCTIVITY IN A FOOD INDUSTRY"

The Paper will be followed by open discussion, and the chair will be taken by the President of the Institution.

Admission to the meeting will be by ticket only, which may be obtained from The Secretary, The Institution of Production Engineers, 10 Chesterfield Street, Mayfair, London, W.1, using the form of application opposite.

COVENANT MEMBERSHIP SUBSCRIPTIONS

The notice printed under the above heading on page 3 of the February, 1959, Journal Supplement is withdrawn. A letter explaining the position has been sent to all members of the Institution who pay their subscriptions under Deed of Covenant.

SOCIAL FUNCTIONS

BIRMINGHAM GRADUATE SECTION

25th Anniversary Grand Buffet Dance, to be held on **Thursday, 5th March, 1959**, at the **Pavilion Suite, County Ground, Edgbaston** (8 p.m. to midnight). Tickets 15s. each. Applications to: **Mr. E. J. Lownes**, Publicity Secretary, 42 Stoney Lane, Bloxwich, Staffs. (enclosing stamped addressed envelope). Remittances should be made payable to The Institution of Production Engineers (Birmingham Graduate Section) and crossed "Social Account".

MIDLANDS REGION DINNER

The **Fifth Annual Midlands Region Dinner** will be held at the **Queen's Hotel, Birmingham**, on **Friday, 10th April, 1959** (6.45 p.m. for 7.15 p.m.). The principal guests will be The Rt. Hon. the Earl of Halsbury, F.R.I.C., F.Inst.P., (President of the Institution); The Right Worshipful The Lord Mayor of Birmingham, Alderman D. Johnstone, J.P.; and Mr. Gerald Nabarro, M.P.

Tickets for the Dinner are 37s. 6d. each (Graduate members of the Institution 27s. 6d.), and application forms have already been circulated to all members of the Midlands Region. Others wishing to attend the Dinner may obtain application forms from the Secretary, 10, Chesterfield Street, Mayfair, London, W.1.

FACTORY EQUIPMENT EXHIBITION

Lord Mills, Minister of Power, is to open the 1959 Factory Equipment Exhibition which is to be held at **Earls Court** from **7th-17th April**.

The Exhibition, which has direct interest for engineers in all types of industry, will show latest methods of heating, air conditioning and ventilation, together with a wide range of workshop, industrial finishing and production equipment and devices for measurement, instrumentation and automatic control.

To: The Secretary,
The Institution of Production Engineers,
10 Chesterfield Street,
Mayfair, London, W.1.

THE 1958 GEORGE BRAY MEMORIAL LECTURE

at The Royal Commonwealth Society, London, 29th April 1959, at 6.30 p.m.

Please send me, when available.....tickets of admission to the above meeting.

NAME
(Block letters please)

ADDRESS.....
.....
.....

ASME PRODUCTION ENGINEERING CONFERENCE

The American Society of Mechanical Engineers announce that a Conference on Production Engineering will be held at the Statler-Hilton Hotel, Detroit, Michigan, from **12th-14th May, 1959.**

Full particulars may be obtained from "Mechanical Engineering," 29 West 39th Street, New York 18, N.Y.

BACIE SEMINAR ON COMMUNICATION

The British Association for Commercial and Industrial Education are holding the third of a series of seminars at Ashridge, Berkhamsted, Hertfordshire, on "**Communication**" from **9th-13th March, 1959.**

This seminar has been arranged with the co-operation and assistance of Mr. A. C. Leyton, of The Northampton College of Advanced Technology, and the programme has been designed to cover the needs of all those concerned with the giving of clear and precise written and oral instructions, and in effective speaking, both formal and informal.

Further information may be obtained on application to Mr. J. F. A. Mortimer, Assistant, Conference and Training Services, B.A.C.I.E., 26a Buckingham Palace Road, London, S.W.1.

REGIONAL MEETING

EAST & WEST RIDINGS

6.30 p.m. March 17th

Grand Hotel, Sheffield.

"Ergonomics in Industry" by K. F. H. Murrell, M.A., F.R.P.S.

Arranged by the Sheffield Section.

SECTION MEETINGS

Visitors Tickets may be obtained from Section Honorary Secretaries

MARCH, 1959

EAST AND WEST RIDINGS REGION

Halifax & Huddersfield Graduate 7.30 p.m. March 18th
Percival Whitley College of Further Education, Halifax.
"The Production of Power from Nuclear Energy" by
A. L. Shaw.
Halifax & Huddersfield Graduate 6.15 p.m. March 16th
Works Visit to David Brown Industries Ltd. Park Gear Works,
Huddersfield.
Rendezvous—Odeon Cinema, Halifax, 6.15 p.m. and Works
Entrance 7 p.m.
Leeds 7 p.m. March 9th
Hotel Metropole, Leeds.
Annual General Meeting (members only) followed by a lecture
"Preventive Maintenance" by R. Shilton, B.Sc.(Eng.)Hons.,
A.M.I.Mech.E., A.M.B.I.M., M.I.Prod.E.
Leeds Graduate 9.30 a.m. March 14th
Works Visit to Versil Ltd., Liversedge, Yorks, Manufacturers
of Glass Fibres.
Sheffield 6.15 p.m. March 23rd
Grand Hotel, Sheffield
Annual General Meeting (members only) followed by a film
at 6.30 p.m. "A Modern Foundry for the Manufacture of
Small Castings by New Moulding Technique" by J. H. Osborn.
Visitors welcome.

EASTERN REGION

Ipswich and Colchester 7 p.m. March 13th
Britannia Works Canteen, Davey Paxman & Co. Ltd., Col-
chester.
Annual General Meeting (members only) at 7 p.m. followed
at 7.30 p.m. by "Technical Problems of the Sugar Beet
Industry" by Dr. R. Jorisch. Invitation lecture to the
Colchester Engineering Society.
Norwich 7.30 p.m. March 18th
Sexton Room, The Assembly House, Norwich.
A lecture will be given on "Development of Gear Hobbing
Process." This is to be illustrated by a film.

MIDLANDS REGION

Birmingham 7 p.m. March 18th
Annual General Meeting (members only) and Visit to Birming-
ham University, Production Engineering Section. Talk by
Prof. N. Dudley, Ph.D., B.Sc., M.I.Prod.E.
Coventry 7.15 p.m. March 16th
Craven Arms, High Street, Coventry.
"The Mass Production of Forgings" by R. E. Winch (illus-
trated by a colour film). Preceded by Annual General Meeting
at 6.45 p.m. (members only).
Shrewsbury 7.30 p.m. March 25th
Shrewsbury Technical College, Abbey Foregate, Shrewsbury.
Annual General Meeting (members only) at 6.45 p.m. followed
by a Film Show.
Wolverhampton Graduate 7 p.m. March 18th
Wolverhampton & Staffs. College of Technology, Wulfruna
Street, Wolverhampton.
Annual General Meeting (members only) at 7 p.m. followed
at 7.30 p.m. by a Film Show. Visitors welcome to the Film
Show.
Wolverhampton Graduate Evening. March 26th
Fischer Bearing Co., Villers Street, Wolverhampton.
Combined visit and lecture.
Worcester 7 p.m. March 25th
Star Hotel, Worcester.
Annual General Meeting at 7 p.m. "Numerical Control of
Machine Tools" by O. S. Puckle.

NORTH MIDLANDS REGION

Derby 7 p.m. March 23rd
Louis Room, St. James's Restaurant, St. James's Street, Derby.
Annual General Meeting (members only) Official Business
followed by a Film Show at 7.15 p.m. "A Century of Engineer-
ing Tool Development," "Forming of Metals".
Lincoln 7.30 p.m. March 12th
Saracen's Head Hotel, Lincoln.
Annual General Meeting (members only) followed by a Show
of Films at 8 p.m. "Automation in the Automobile Industry,"
"Automation."
Leicester 7.15 p.m. March 12th
"The Cromwell Room," Grand Hotel, Leicester.
"Future Development of Cutting Tool Materials" by R. N.
Cook, A.M.I.Mech.E., M.I.Prod.E.
Nottingham 7 p.m. March 4th
The Reform Club, Victoria Street, Nottingham.
Annual General Meeting (members only) followed by the show-
ing of three sound films—"An Introduction to Modern
Gears," "The Wheel and the Way—Grinding Wheels and
Techniques," "The Great Day—Calder Hall."
Nottingham 8 a.m. March 3rd
Works visit to Shell Oil Refinery, Stanlow
Peterborough 7.30 p.m. March 18th
Conference Room, Peterscourt, Peterborough.
Annual General Meeting (members only) and will be followed
by a film show commencing at 8 p.m. (Open to Visitors).

NORTH WESTERN REGION

Liverpool 7.30 p.m. March 11th
Exchange Hotel, Tithebarn Street, Liverpool, 2.
"Electronic Control of Machine Tools" by J. A. Stokes,
B.Sc., A.M.I.E.E.; follow-up talk by J. Adams.
Liverpool 7.30 p.m. March 24th
Exchange Hotel, Tithebarn Street, Liverpool, 2.
Annual General Meeting (members only) followed by a
topical film.
Manchester Graduate 6.45 p.m. March 18th
Reynolds Hall, Room C3, The Manchester College of Science
and Technology, Sackville Street, Manchester.
Annual General Meeting followed by a lecture at 7.15 p.m.
"Social Influences Affecting Industrial Output" by T. Lupton,
M.A. (Mr. Lupton's main research has been the study of
social factors affecting the response to financial incentive
schemes, and the dynamics of small industrial working groups
generally.)
Preston 7 p.m. March 11th
Municipal Technical College, Blakey Moor, Blackburn.
Annual General Meeting (members only) followed by
"Production Engineering Brains Trust." Chairman of Panel:
F. Grimshaw, O.B.E., M.I.Prod.E. Panel will consist of
representatives of Production Engineering: Accounting and
Costing; Trade Unionism; Personnel; Management; Education.
Manchester 6.30 p.m. March 24th
Reynolds Hall, Manchester College of Science and Technology,
Sackville Street, Manchester.
Annual General Meeting (members only) followed by a lecture
"Machining of Uranium, Thorium, Niobium, Vanadium,
Zirconium and Beryllium" by A. Piggott, A.M.I.Mech.E.
(Principal of the Engineering Research & Development Branch,
United Kingdom Atomic Engineering Authority.)

NORTHERN REGION

Newcastle upon Tyne 7 p.m. March 16th
Rutherford College of Technology, Northumberland Road,
Newcastle upon Tyne.
"Transfer Machines" by C. D. Camwell.

NORTHERN IRELAND REGION

Belfast 7.30 p.m. March 19th
The Kensington Hotel, College Square East, Belfast.
Section and Regional Annual General Meeting and Dinner.

SCOTLAND REGION

Edinburgh 7.30 p.m. March 18th
North British Hotel, Princes Street, Edinburgh.
"Job Evaluation and Wage Structure" by A. S. Wilson.
A.M.I.Weld., A.M.I.Prod.E. Visitors welcome. Followed
by Annual General Meeting (members only) at 9.30 p.m.

Glasgow 7.30 p.m. March 19th
The Institution of Engineers and Shipbuilders, 39 Elmbank
Crescent, Glasgow, C.2.

"Recent Developments in Sintered Oxide Cutting Tools"
by R. N. Cook, A.M.I.Mech.E., A.M.I.Prod.E.

Glasgow 7.30 p.m. March 5th
The Institution of Engineers and Shipbuilders, 39 Elmbank
Crescent, Glasgow, C.2.

Annual General Meeting followed by an open discussion.
At 8 p.m.: "Practical Production Problems." (Case studies
of actual problems from local industry will be presented and
discussed.)

SOUTH EASTERN REGION

London 7 p.m. March 5th
Creeds of Croydon.
"High Speed Cinematography in Production" by J.
Hadland.

London 7 p.m. March 19th
Royal Commonwealth Society, Northumberland Avenue,
Strand, London, W.C.2.

Annual General Meeting (members only), also "The Diploma
of Technology and the Place of Human Studies in its Syllabus"
by A. C. Leyton, B.A., Ll.B.

London Graduate 7.15 p.m. March 18th
10 Chesterfield Street, Mayfair, London, W.1.

Annual General Meeting (members only) followed by a Film
Evening.

London Graduate 6.30 p.m. for 7 p.m. March 21st
The Regent Palace Hotel, Piccadilly Circus, London, W.1.
Dinner/Dance.

Luton Graduate March 11th
Evening visit to the factory of The Skefco Ball Bearing Co. Ltd.

Rochester & District Graduate 7.30 p.m. March 26th
Old Palace, Maidstone.

"Casting Design with particular Reference to High Duty
Irons" by D. F. Knight, M.I.B.F.

South Essex 7.30 p.m. March 18th
The Hoffman Mfg. Co. Ltd., Social Centre, New Street,
Chelmsford.

Annual General Meeting (members only).

SOUTH WESTERN REGION

Western Graduate 7.30 p.m. March 11th
Royal Hotel, College Green, Bristol.

Annual General Meeting followed by a film "An Introduction
to Modern Gears."

SOUTHERN REGION

Oxford 7.30 p.m. March 17th
Kings Head Hotel, Aylesbury, Bucks.

A lecture will be given on "Chemicals and Plastics."

Reading

7.30 p.m. March 19th
Great Western Hotel, Reading.
"British Aircraft Production Methods" by L. G. Burnard,
M.I.Prod.E.

WALES REGION

Cardiff 7 p.m. March 20th
South Wales Institute of Engineers, Park Place, Cardiff.

Annual General Meeting (members only) at 7 p.m., followed
at 7.30 p.m. by "Engineering Ceramics" by C. G. Martin.

Swansea 7 p.m. March 18th
Central Library, Swansea.

"Properties of Pure Molybdenum Disulphide and its
Application to Production Engineering" by H. Peter Jost,
M.I.Mech.E., M.I.Prod.E., Mem.A.S.M.E.

APRIL 2nd-9th

MIDLANDS REGION

Birmingham Graduate 7 p.m. April 7th
Visit to Round Oaks Steel Works, Brierly Hill, Worcestershire.

Wolverhampton 7.15 p.m. April 8th
Wolverhampton and Staffs. College of Technology.

"Materials Handling" by L. J. Hoefkens, A.I.Prod.E.
Combined meeting with the Graduate Section.

NORTHERN IRELAND REGION

Belfast 7.30 p.m. April 9th
The Kensington Hotel, College Square East, Belfast.

"Application of Modern Production Control Techniques"
by T. W. Price, F.Inst.D., M.I.Prod.E., M.I.A.

NORTH WESTERN REGION

Liverpool Graduate 7.30 p.m. April 7th
Radiant House, Bold Street, Liverpool, 1.

"Mistakes" by E. Walshaw, G.I.Mech.E., A.M.I.Prod.E.

Preston 7.30 p.m. April 8th
Accrington College of Further Education, Sandy Lane,
Accrington.

"Handling and Packaging for Export" by S. C. Owen.
The lecture will be augmented by a sound film, "Handling
with Care."

SOUTH EASTERN REGION

Luton Graduate 7.30 p.m. April 2nd
Small Assembly Hall, Luton Town Hall.

"Cutting Tool Research and Development" by L. Holland,
A.M.I.E.D., followed immediately by the Annual General
Meeting.

SOUTHERN REGION

Southampton 7.30 p.m. for 8 p.m. April 3rd
The Polygon Hotel, Southampton.

Dinner/Dance.

SOUTH WESTERN REGION

Western 7.30 p.m. April 8th
Bristol Aircraft Limited, Old Mixon.

Film Show.

PRODUCTION APPOINTMENTS

BULLETIN No. 66
MARCH 1959

The last date for receiving material for insertion in the following month's bulletin is the 20th of each month, and cancellations cannot be accepted after this date. Correspondence should be addressed to: The Publications Department, The Institution of Production Engineers, 10 Chesterfield Street, Mayfair, London W.1 (Telephone: GROsvenor 5254).

The fee for insertion of particulars regarding each appointment is £4 4s. (up to 100 words) and £1 1s. for each additional 100 words or part thereof. The special rate per insertion for firms affiliated to the Institution, technical colleges and universities is £2 2s. for each appointment.

Advertisers are advised that better response is likely if, in addition to essential qualifications, the following information is given:—
(a) Location of appointment; (b) Status in the organisation and scope of promotion; (c) Salary range and age range. Advertisers are asked to advise the Institution when appointments are filled. The Institution reserves the right to refuse or withdraw any announcement and also to make any alteration in the wording to ensure conformity with the Institution standards. *Members interested in the following appointments should make application in accordance with the terms of notice. No correspondence can be undertaken by the Secretary other than the forwarding of replies to Box Nos.*

Engineers. An interesting and responsible position is offered to Engineers who have the ability to organise and operate special technical courses for responsible engineering personnel. The successful candidate must possess a sound practical engineering background, personality, and the ability to put over to specialist Engineers—by lecture and discussion—subjects of a controversial nature. Write giving full details to: The Secretary, Production Engineering Research Association, Melton Mowbray, Leicestershire.

Machine Shop Chief Inspector required. Only young men able to obtain absolutely first-class machine tool components of highest quality and fine limits, previously employed by a Company of standing on such work, will be considered. Present number of employees 120, developing to 200. Monthly staff appointment. Excellent scope for top grade, matured, sensible man. Apply in complete confidence, stating career in correct chronological order, together with commencing salary required to: Balding Engineering Ltd., Beaver Works, Norwich.

Senior Production Engineer (Electronics). The English Electric Company Ltd., Stevenage, Herts., require a Senior Production Engineer (Electronics) to fill a senior position on the production of electronic units for guided weapons. Mechanical Engineers with extensive experience of medium batch production of electronic units, or electronic engineers with a strong, practical production outlook, will suit this position. Knowledge of printed circuitry, potting, encapsulation and later electronic practices such as flow and plate soldering is required. This is a position with responsibility, calling for drive and initiative. There is great scope for advancement and a substantial salary will be paid to the selected applicant. Housing assistance may be made available in certain cases after an initial waiting period. Replies should be made in the first instance to: Dept. C.P.S., Marconi House, 336/7 Strand, London, W.C.2, quoting reference EJ 1394R.

Chief Inspector. D. Napier & Son Ltd. Applications are invited for the post of Chief Inspector at one of the Company's works in N.W. England. This offers a unique opportunity for a person with a good engineering background, having a knowledge of gauging techniques and the ability to initiate inspection procedures and administer a department. Experience in a similar capacity on the manufacture and assembly of gas turbine engines to AID/ARB requirements would be an advantage. This is a senior appointment with prospects of advancement and the successful candidate would benefit from the Company's pension and life assurance scheme. Please write giving full details to: Dept. C.P.S., Marconi House, 336/7 Strand, London, W.C.2, quoting reference PE 794F.

Factory Layout and Handling Engineers required to advise on problems submitted by engineering firms throughout the country, and carry out surveys in the firms' works. Ability to work on own initiative and experience in report writing essential. Good salary and superannuation scheme. Excellent prospects for energetic and competent engineers. Send details to: The Secretary, Production Engineering Research Association, Melton Mowbray, Leicestershire.

Jig & Tool Draughtsman. Newton Chambers & Company Limited, Thorncliffe, near Sheffield. An experienced Jig and Tool Draughtsman is required for an appointment in the Company's Excavator Division which manufactures the NCK range of excavators and mobile cranes. Applicants should be aged between 21 and 40 years and have experience of designing jigs and fixtures for machinery and assembling medium sized components. The drawing office is a modern one and working conditions are excellent. The starting salary would be commensurate with the experience offered and there is a good pension scheme. Applications listing brief details of age, experience, qualifications, etc., should be addressed to: The Staff Department.

Specialist Production Engineer. Liaison with Design Departments. A vacancy exists for a Production Engineer with good experience of production techniques as applied to the manufacture of precision electro-mechanical instruments and equipment. The engineer appointed will work with a design and development team on guided weapon control systems and advise them on all production aspects relating to the designs. He must therefore not only be an experienced production man, but also have a good theoretical background. The post is a senior one and an appropriately high salary will be paid. Post based at Bracknell, where housing is available in approved cases. Applications invited by: Mr. R. W. H. Lubbock, B.Sc., Sperry Gyroscope Company Limited, Bracknell, Berks.

Production Engineer required to be responsible for electronic assembly and model shops employing both male and female labour. The Company is mainly engaged in custom-built and small batch production, but seeks to appoint a man with a thorough knowledge of all production techniques as applied to the electronics industry, so that present employment in other types of production should not deter applicants. This is a senior appointment in an expanding company and a commensurate salary is envisaged. The Company operates an up-to-date pension scheme and a progressive career in telecommunications engineering is offered. Write fully, quoting reference EN/15 to: The Personnel Officer, International Aeradio Ltd., Hayes Road, Southall, Middlesex.

Press Tool Designers and Draughtsmen; Jig and Tool Designers and Draughtsmen; Planning Engineers; Plant Layout Draughtsmen: Jaguar Cars Limited invite applications for the following positions in an expanding Production Department: Press Tool Designers and Draughtsmen; Jig and Tool Designers and Draughtsmen: Candidates should have experience in the design of medium sized press tools, jigs and fixtures. Planning Engineers; Plant Layout Draughtsmen: Candidates should have experience in assembly track planning for medium quantity production. Applications in writing stating qualifications, experience and present salary, will be treated in confidence and should be addressed to: Personnel Manager, Jaguar Cars Limited, Coventry.

Careers in Management Consulting. Stevenson, Jordan & Harrison, Ltd., invite applications to join their staff, for employment on Work Study and Production Engineering. Candidates must have an engineering degree or first-class professional qualification, coupled with several years' executive experience in the development and application of work study or production control techniques in at least two manufacturing industries. This work requires men of integrity, initiative, personality and sound judgment. Age range 33-45. Substantial salaries will be paid, with out-of-pocket expenses. The Company operates a pension scheme and a profit participation scheme. Opportunities of service abroad, if desired. These appointments offer exceptional scope for rapid advancement to supervisory level. They provide opportunity to work in a wide range of industry and to broaden existing knowledge and skill; Production and Work Study Engineers will be encouraged to acquire familiarity with modern financial control techniques. Write in confidence, stating age, education, qualifications and outline of career (quoting ref. PE 1/59) to: The Secretary, Stevenson, Jordan & Harrison Ltd., 30 Windsor House, 46 Victoria Street, London, S.W.1.

Tool Design/Methods Engineer to study and revise methods in use in a modern instrument factory and design necessary special purpose tools and machines, etc. The successful applicant will be under 35 years of age; will have had tool design and methods investigation experience in the light engineering industry; have a knowledge of materials, mechanics and mathematics to O.N.C. standard and will earn a salary suitable to his capabilities. De Grave Short & Co. Ltd., Cray Valley Works, Orpington, Kent. Mark envelope M.D's.SEC/W.M.

Machine Tool Technical Sales Representative. Applications are invited from engineers with good general knowledge of machine tools, age 35 to 40, for the Lancashire and Yorkshire area, to represent a national company. They must be prepared to live either in Manchester or Sheffield. Candidates should have Higher National Certificate and have served an engineering apprenticeship. Sales experience is an advantage. A good basic salary plus commission is paid and a car provided. Contributory pension scheme in operation. Applications, which will be treated in confidence, must include details of past experience, present salary and position held. Box No. 1835, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Senior Draughtsmen required for interesting work on special purpose machinery and automation. Knowledge of hydraulics and electrical installation an advantage, but not essential. A working knowledge of production engineering is however expected. Salary according to ability up to £1,000 per annum, 37-hour week, 1½ paid for all overtime. Excellent conditions, three weeks' paid holiday, staff pension scheme in operation. Apply in writing, quoting "Ref.Mach.Design." Appointments can be arranged from 8.30 a.m. to 12 noon Saturday morning, or 8.30 a.m. to 6 p.m. Monday to Friday, to: Middlesex Tool & Gauge Co. Ltd., Park Royal Road, London, N.W.10. Phone: ELGar 5361.

Qualified Engineers. Industrial Administration Ltd. have vacancies for qualified engineers on their Management Consulting staff. Applications are invited from University graduates and chartered engineers, aged 28-40, who have held executive positions in manufacturing industries for at least five years and have good production engineering or industrial engineering experience. Applications, giving age, details of education, qualifications and experience should be addressed to: The Appointments Secretary (Ref. 629) Industrial Administration Ltd., 18 Thurloe Place, London, S.W.7.

Assistant Engineer required by small progressive industrial firm with international connections, engaged in light engineering in the Cheltenham area. Practical experience in tool room, machine shop and drawing office essential. Experience with automatic lathes and factory planning and layout an advantage. Applicants would be responsible to Production Director. Age 25-30. Salary according to experience. Box No. 1836, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Production Specialist. We need the services of a man to undertake, in our steel strip rolling mills, such efficiency assignments as:—increased machine utilisation; development of ancillary equipment; improved materials handling; better labour utilisation. We have in mind a qualified engineer (not less than H.N.C.), age 35/45, with experience of high production medium engineering equipment in a similar or allied industry to our own. He must also have had experience of work and method studies and design. This is a senior appointment in the Sheffield area, justifying a starting salary of up to £2,000. We operate a contributory pension scheme and believe that conditions and prospects are attractive. Arrangements have been made for the selection of applicants for preliminary interview to be dealt with in London. Please send full details (personal: education: training: experience: salaries earned) to: Mr. F. E. Oldfield, 123 Queen Victoria Street, London, E.C.4, who has been asked to handle the matter for us, and to treat all applications as confidential.

Work Study Engineers; Draughtsmen. W. H. Allen Sons & Company Ltd., Bedford, require for their Production Engineering Department **Work Study Engineers.** Experienced in the application of Work Study to machine or assembly shops. **Draughtsmen.** For the design of jigs, tools, fixtures and tool layouts. These positions will interest men of sound education and practical experience, who can carry out on their own initiative, studies and investigations into problems affecting the small-batch production of electrical machinery, diesel engines, steam and gas turbines and centrifugal pumps. Please apply in writing, stating age, present salary and full details of education, training and experience to: The Personnel Manager.

Methods Engineer Required with engineering apprenticeship and O.N.C. Experience in component manufacture and assembly, including dip and spray enamelling of a wide variety of sheet steel products, on a job-batch production basis. Knowledge of shop layout, progressing, planning and operation scheduling an advantage. Good salary and prospects. Apply stating age and experience to: The Personnel Manager, G. A. Harvey & Co. (London) Ltd., Woolwich Road, Charlton, London, S.E.7.

Production Engineer. Applications are invited for the new post of Production Engineer at H. Massil & Sons (Woodturners) Ltd., Welham Green, Hatfield, Herts. The successful candidate will be directly responsible to the Managing Director for all engineering functions of the Company. As such he will supervise the Works Engineer but will devote most of his time to the development of improved production and handling methods. Applicants should be corporate members of the I.Mech.E., or the I.Prod.E., with past experience in methods development work. Knowledge of woodworking will be an advantage but is not essential. Prospects of senior status for a man who proves himself in this new appointment. Apply in confidence to: The Managing Director, at the above address.

Worcester—Jig and Tool Draughtsman required for engineering works engaged on mechanical handling. Five day week, canteen, pension scheme. Apply with full particulars of age, experience, salary and qualifications to: The Mining Engineering Company Limited, Worcester.

Production Controller required for light engineering works in the North West London area. The Company is an old established one and has a household name. Applicants must have had practical experience in production planning, material ordering, shop orders, progressing, machine loading schedules, etc., in connection with batch production of specialised products. The position calls for a man with a good engineering background, well versed in present day machine shop practice who will be responsible to the Works Manager for all aspects of production control in the factory. He must possess a good personality, drive and enthusiasm and have the ability to build up and lead a production team. Age group 30/45, salary £1,000 plus according to experience. A staff pension scheme is available. Applications giving age, experience and qualifications to: Director of Production, The Tilley Lamp Co. Ltd., Brent Works, Colindale, London, N.W.9.

Process Planner. Portasilo Limited. The leading manufacturers of portable bulk handling and storage equipment invite applications from young production engineers for the position of Process Planner, which is a new and responsible position in the Engineering Division at York. This well established but rapidly growing member of a group of companies specialises in the manufacture of an original range of equipment for which it holds world patents and has an extensive programme of development in hand. Applicants (aged 26-30) should have at least five years' practical experience of sheet and plate metal work, fabrication and welding, and machining, and should be educated to at least H.N.C. level. The duties will include workshop planning, getting out workshop procedures, loading and progressing. Only those who consider themselves to have managerial potential should apply. This permanent position offers excellent staff conditions, five day week, progressive salary, bi-annual bonus and participation in non-contributory pension scheme. Residence in or near York is essential and assistance will be given with housing if required. Written applications in confidence stating age, full details of training and experience and some indication of salary required should be addressed for the personal attention of: Managing Director, Portasilo Limited, Blue Bridge Lane, York.

Research Engineer/Physicist. Division of Metrology, C.S.I.R.O., Australia. Applications are invited from Honours Graduates in Engineering or Science, with physics as major subject and post-graduate experience. Must be capable of initiating and developing new and improved measuring techniques and equipment in engineering metrology, particularly large-scale metrology, dynamic metrology and gears and cutting equipment. Salary dependent on qualifications and experience in the ranges: £A1,326 to £A1,951 p.a. or £A2,061 to £A2,336 p.a. Further particulars of conditions, fares, etc., obtainable from: Mr. E. J. Drake, Chief Scientific Liaison Officer, Africa House, Kingsway, London, W.C.2, to whom applications, referring to Appointment No. 750/188, should be addressed by the 28th March, 1959.

Assistant Works Manager for Merseyside medium/heavy engineers employing 300. Applicants must have proved organising ability in a similar position and have sound production engineering and production control experience; corporate membership of a professional Institution and technical qualifications. Age between 32/45. Please send tabulated chronological details of training and subsequent experience, age and salary required to: Managing Director, Box No. 1837, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Assistant to Works Manager. A young engineer of high calibre required for expanding light engineering Company in North West London area. H.N.C. or equivalent qualifications required and considerable practical experience essential, particularly machine shop and general assembly practice. The vacancy offers excellent scope and real opportunity for promotion on own ability to senior managerial position. Salary will be up to £900 p.a. and a staff pension scheme is available. Applications giving age, experience and qualifications to: Director of Production, The Tilley Lamp Co. Ltd., Brent Works, Colindale, London, N.W.9.

EDUCATIONAL APPOINTMENTS

College of Technology, Bristol, 7. (Selected for development into a College of Advanced Technology.)

Senior Lecturer in Production Engineering. Governors invite applications for post of Senior Lecturer in Production Engineering with responsibility for Diploma and Certificate courses in Production Engineering and associated craft courses in Department of Mechanical Engineering. Candidates should hold a degree or equivalent and have had teaching and/or industrial and/or research experience. Salary in accordance with Burnham Technical Report, 1956 (as amended), £1,417 10s. 0d. by £50 to £1,627 10s. 0d. Initial salary dependent on approved teaching, industrial or research experience. Application form (returnable within two weeks of appearance of advertisement) and further details from: Registrar, College of Technology, Ashley Down, Bristol, 7.

The College of Aeronautics, Cranfield, Bletchley, Bucks. Demonstrator in the Department of Aircraft Economics and Production. Applications are invited from qualified production engineers for the appointment of Demonstrator in the Department of Aircraft Economics and Production. The successful applicant will be expected to demonstrate to post-graduate students a wide range of machining and production processes and to participate in research work and the expansion of the industrial laboratory. Opportunities will be given for advanced studies. Salary depending upon experience and qualifications up to £1,000 p.a., with superannuation under F.S.S.U., and family allowance. Applications should be addressed to: The Recorder, The College of Aeronautics, Cranfield, Bletchley, Bucks, from whom further particulars may be obtained.

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